

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number
WO 2004/062896 A1

(51) International Patent Classification⁷: **B29D 23/20**,
B29C 45/72, C08K 3/00, 3/10, 3/34, 9/04, C08L 101/12

(21) International Application Number:
PCT/AU2004/000060

(22) International Filing Date: 16 January 2004 (16.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003900292 16 January 2003 (16.01.2003) AU
2003901342 24 March 2003 (24.03.2003) AU
2003901952 24 April 2003 (24.04.2003) AU

(71) Applicant and

(72) Inventor: JACOBS, Ian, Orde, Michael [AU/AU]; 32
Volitans Avenue, Mt. Eliza, VIC 3930 (AU).

(74) Agent: DARK, Andrew; 1 Nicholson Street, Melbourne,
Victoria 3000 (AU).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS, COMPOSITIONS AND BLENDS FOR FORMING ARTICLES HAVING IMPROVED ENVIRONMEN-
TAL STRESS CRACK RESISTANCE

(57) Abstract: Several processes for the manufacture of thin-walled tubes are described, including: injection moulding an article and annealing the article, injection moulding a blend of a polymer and a high melt flow polymer, injection moulding a blend of a polymer and nanoparticles or nanocomposites. Using nanoparticles to improve ESCR and/or tear resistance of a polymer or blend is also disclosed.

WO 2004/062896 A1

